

1 Introduction

1.1 BACKGROUND

On January 8, 1999 the County of Imperial Board of Supervisors accepted as complete, an application by the Newmont Gold Company (Newmont) for an amendment to a Conditional Use Permit for the Mesquite Mine. The Mesquite Mine is an existing open-pit mine that uses a cyanide heap-leach process to produce precious metals. The heap leach process is described in Section 2.1.2.3. Newmont's application is for an expansion of the existing Mesquite Mine, and includes an amendment to the existing Plan of Operations (POO) and revised Reclamation Plan.

The project proposes the expansion of the open-pit mines and overburden/interburden storage areas, and the expansion of the heap leach facilities. The Proposed Action involves the processing of approximately 89 million tons of ore and 242 million tons of waste rock from two existing pits. The project also includes the permitted expansion on approximately 91.6 acres of private land to accommodate the expansion Heap Leach Pad 6. As part of the proposed expansion, it is also necessary to construct ancillary facilities such as access roads and storm water diversion channels. The expansion encompasses 693 acres of federal, state and private (patented) land, of which 190 acres would be new disturbance, currently unpermitted. Approximately 332 of the remaining acres are already permitted, while the Big Chief Pit would also be extended into 171 acres of land previously disturbed by mining activities. The State Lands Commission (SLC) is concurrently processing an application for a mineral extraction lease regarding the expansion on 657.85 acres of land north of the Big Chief Pit-subject to SLC jurisdiction. Less than 97 acres of that area is proposed for disturbance.

In accordance with Public Resources Code Section 21151.7, *et seq.*, herein, California Environmental Quality Act (CEQA), an Environmental Impact Report is required for “any open-pit mining operation which is subject to the Surface Mining and Reclamation Act of 1975 and utilizes a cyanide heap-leaching process for the purpose of producing gold or other precious metals.” For this reason, Imperial County has prepared this Environmental Impact Report (EIR) to address the environmental consequences of Newmont's proposal. The County of Imperial is the lead agency for the purpose of compliance with the requirements of CEQA for the Proposed Action.

The BLM determined that the Proposed Action would require an Environmental Impact Statement (EIS) for compliance with Public Law 91-90, 42 U.S.C. 4321, herein, National Environmental Policy Act (NEPA) and the BLM NEPA Handbook (BLM, 1988) and the implementing of Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations (CFR) Section 1500-1508). According to the CFR- Section 3809.1-7, a significant modification of an approved plan must be reviewed and approved by the authorized officer (i.e., BLM) in the same manner as the initial

plan. The proposed plan amendment would require discretionary actions by the County and BLM; and therefore, is both a project under CEQA and an action under NEPA.

Because the NEPA process for an EIS and the CEQA process for an EIR are similar, the documents can be completed in a combined format that accommodates the requirements of both agencies. CEQA and NEPA encourage such a cooperative effort for joint NEPA and CEQA planning processes, joint environmental research and studies, joint public hearings and joint environmental impact documents to reduce duplication of effort. This joint EIR/EIS, undertaken by the County of Imperial and the U.S. Bureau of Land Management, has been prepared to disclose environmental impacts to decision makers and the public, identify and prevent environmental damage, enhance public participation, foster intergovernmental coordination, and disclose agency decision making.

1.2 PURPOSE AND NEED FOR THE PROJECT

Current ore reserves included in the Mesquite Consolidated POO would be depleted no later than the middle of the year 2001. Ore reserves within the proposed expansion area could allow continuation of mine operations through the year 2006.

Newmont's primary purpose is to profitably recover precious metal known to exist from the staked mining claims at the Mesquite Mine. This objective, plus the other objectives of the Applicant and the lead and responsible/cooperating agencies define the purpose of the Mesquite Mine Expansion. These goals influence the analysis of alternatives in later chapters, primarily because the California Environmental Quality Act (CEQA) requires that the Environmental Impact Report (EIR):

"[d]escribe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project . . ." (*Guidelines § 15126.6(b)*).

The National Environmental Policy Act (NEPA) not only requires that an Environmental Impact Statement (EIS) describe a range of alternatives, but an EIS must:

"[r]igorously explore and objectively evaluate all reasonable alternatives" 40 --CFR § 1502.14.

The objectives identified for this project are divided into separate categories because Applicant objectives, Imperial County objectives, Bureau of Land Management objectives, and the objectives of other participating agencies may be different. The following objectives are defined, in their totality, as the Project Objectives.

1.2.1 Proposed Action Objectives

1.2.1.1 Applicant's Objectives

- Profitably recover precious metal from the staked mining claims at the Mesquite Mine;
- Fully exercise their rights under the General Mining Law of 1872 as related to Federal lands;
- Develop minerals on California State lands in accordance with applicable regulations, as contained in Division 6 of the California Public Resources Code.
- Reclaim the project area in a manner that is environmentally responsible and in compliance with United States mining laws, the California Desert Conservation Area Plan, the Federal Land Policy and Management Act, the California Surface Mining and Reclamation Act and Imperial County's implementing regulations, and other applicable laws and regulations; and,
- Continue to provide employment to 167 employees of the Mesquite Mine.

1.2.1.2 Imperial County Objectives

- Maintain and continue to build Imperial County's economy by approving an environmentally and economically sound project that defers job loss associated with the closing of the Mesquite Mine;
- Reuse disturbed sites with existing infrastructure to allow continued employment, yet avoid undue degradation of the desert environment; and,
- Ensure conformance with the California Surface Mining and Reclamation Act (SMARA) and the County's Groundwater Management Ordinance.

1.2.1.3 U.S. Bureau of Land Management (BLM) Objectives

- Comprehensive management of public land to allow for the development of mineral resources under authority of the federal mining laws, while preventing unnecessary or undue degradation of federally administered and adjacent land.

1.2.1.4 Other Federal, State and Local Agencies' Objectives

- Ensure projects are not approved unless they are in conformance with all applicable federal, state, and local laws and regulations.

1.3 PROJECT BACKGROUND

1.3.1 General Location

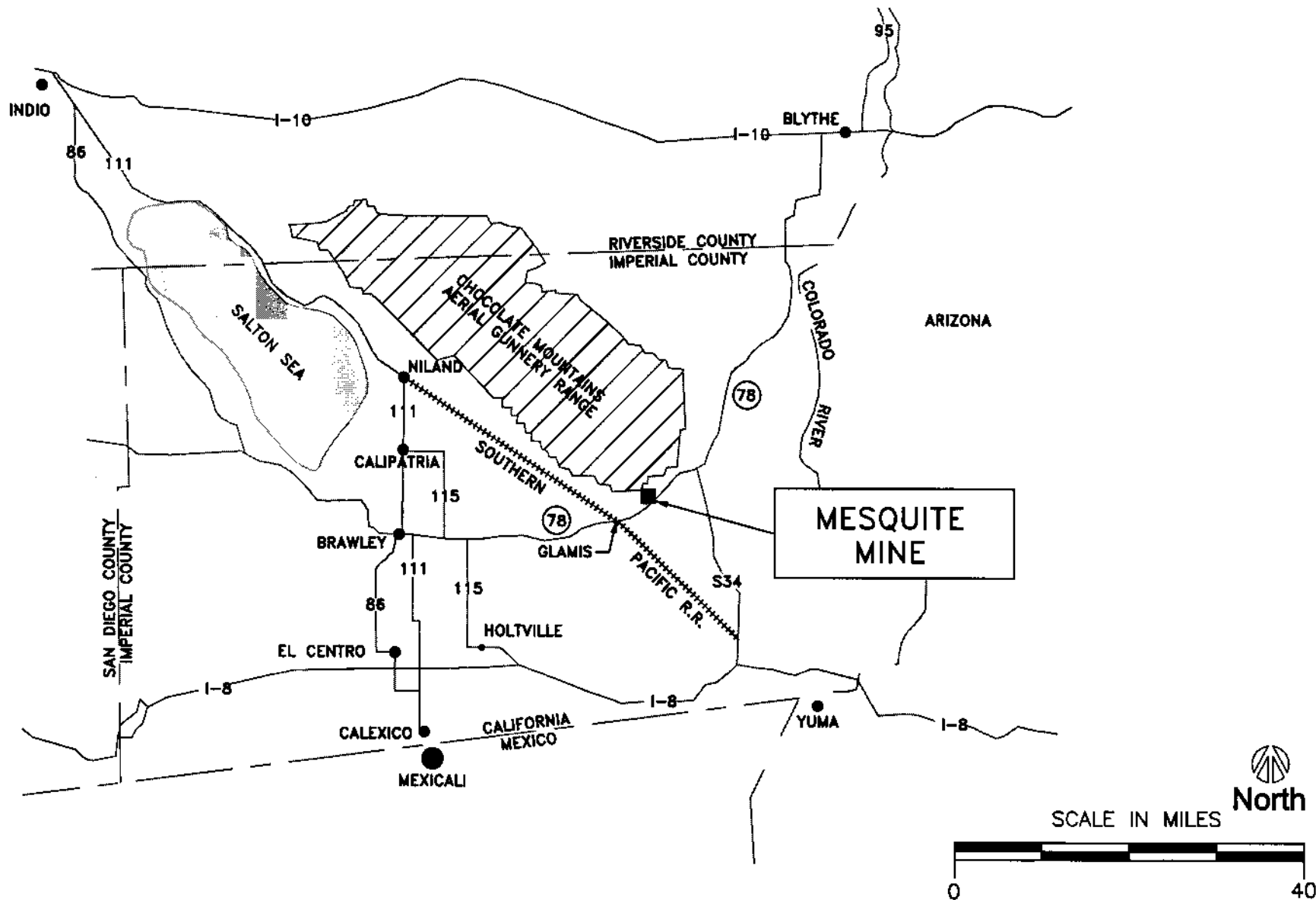
The Mesquite Mine is located in the Mesquite Mining District, at the southern end of the Chocolate Mountains, approximately 33 miles east of the City of Brawley in eastern Imperial County, California (Figure 1.3-1). The facility currently encompasses approximately 5,200 acres, of which 3,655 acres have been disturbed under existing permits and approvals. The total acreage on which disturbance has been permitted and approved is 4,962 under previous BLM and County approvals. The site is bordered to the north by the United States Department of the Navy Chocolate Mountains Aerial Gunnery Range (CMAGR) and to the east and south by California State Highway 78. The CMAGR is actively used by the U.S. Marine Corps for military aircraft training, including the delivery of live ordnance. The permanent Glamis Beach Store and the seasonal Boardman Store are located approximately 4.3 and 3.2 miles to the southwest of the Mine property, respectively. The unincorporated community of Palo Verde is located approximately 35 miles to the northeast.

1.3.2 Relationship to Existing Facilities

This section provides a brief description of the existing Mesquite Mine operations. A full description of how these existing facilities and operations would be affected by the proposed Mesquite Mine Expansion is provided in Chapters 2.0 (Alternatives Including the Proposed Action) and 4.0 (Environmental Consequences) of this EIR/EIS.

The Mesquite Mine began operations under an approved plan of operations (POO) during 1985. Since this time, several expansions and plan modifications have occurred, which are summarized within the approved Mesquite Mine Consolidated Plan of Operations (Consolidated POO), dated October 1995. Most of the mine property is owned by Hospah Coal Company, leased to Santa Fe Pacific Gold Corporation (SFPGC), and operated by Newmont Gold Company. SFPGC and Newmont Gold Company are subsidiaries of Newmont Mining Corporation. Newmont Mining Corporation is a Delaware corporation headquartered in Denver, Colorado. Newmont focuses on mining, recovery, and marketing of gold from its reserve holdings.

Operations at the Mesquite Mine consist of several open pits, overburden/interburden storage areas, heap leach pads, and ancillary facilities for the recovery of precious metals.



SOURCE: Newmont Mining Corporation, 1999

7/7/00

Mesquite Mine Expansion EIR/EIS

Site Location Map

FIGURE

1.3-1

The areas of existing and permitted facilities at Newmont's Mesquite Mine are shown in Figure 1.3-2. Facilities (Table 1.3-1) currently consist of:

1. three open pit mines (Big Chief, Rainbow and Vista);
2. seven heap leach pads (Vista Pad, and Pads 1, 2, 3, 4, 5, and 6). All pads are served by a single drainage collection network and process solution ponds;
3. fifteen overburden/interburden storage areas (OISAs) and clay storage areas;
4. ancillary facilities, including administrative offices, warehouse, maintenance shops, laboratory and gold plant;
5. haul roads and storm water diversion channels; and
6. limited land disturbances associated with permitted exploration activities.

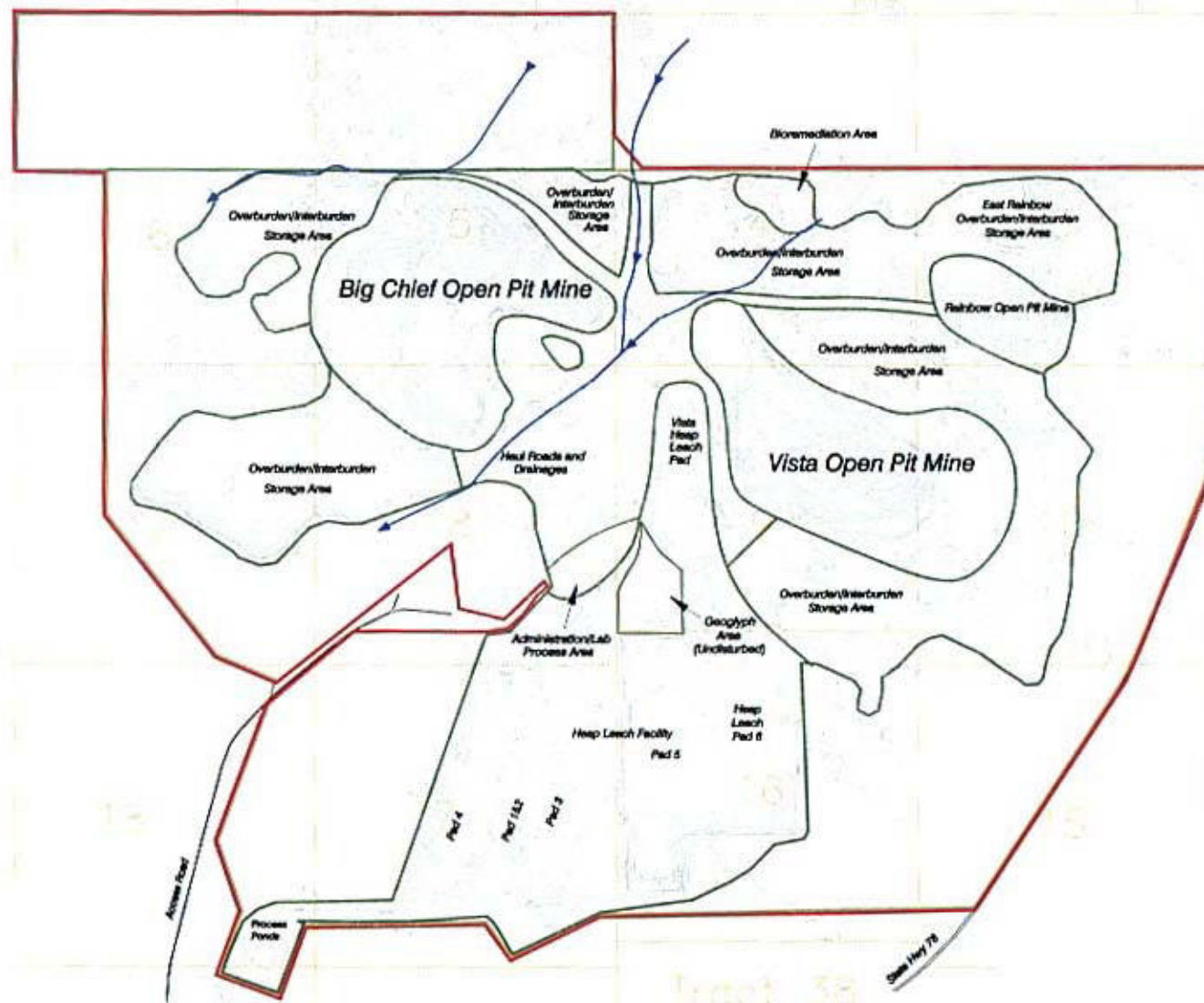
Table 1.3-1 lists acres that have been disturbed by operations, to date, under current permits and approvals.

The Mesquite Mine began mining operations in late 1985. Since that time, several expansions and modifications to operations have taken place. Previous approvals included the construction and operation of facilities and related land disturbance activities in all or parts of 2-11, 15-21, 28, and 33 in T13S, R19E, and Sections 4, 28 and 33 in T14S, R19E. Areas approved for mine pit, leach pad or OISA disturbance in past Plans of Operation are shown in Figure 1.3-3.

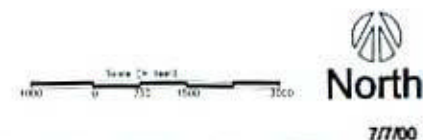
The proposed mine expansion areas would be located immediately adjacent to the existing Mesquite Mine facilities (see Figure 1.3-3). The relationship between these proposed expansion areas and public lands is shown in Figure 1.3-4. Without the approval of the mine expansion, the Mesquite Mine is expected to complete mining no later than the middle of the year 2001, given existing and reasonably foreseeable gold prices and mining technology and remaining ore deposits within the permitted mine boundaries. After the completion of excavation activities, leaching and rinsing of ore that had previously been excavated would continue. Once closed, the Mesquite Mine would require new permits to reopen and operate.

Mining operations consist of drilling and blasting of rock from mine pits, hauling of overburden materials from the pits to the stockpiles and hauling of ore from the pits to an engineered heap leach facility. Mining activities are conducted on a 20-hour-per-day, six-day-per-week schedule. This schedule changes from time to time, depending upon operating or economic conditions. Pending project approvals, mining activities will be conducted on a 24-hour-per-day, seven-day-per-week schedule.

In 1995, Imperial County and BLM approved the future construction and operation of the Mesquite Regional Landfill Project. This is a project of ARID Operations, and not Newmont Gold Company.



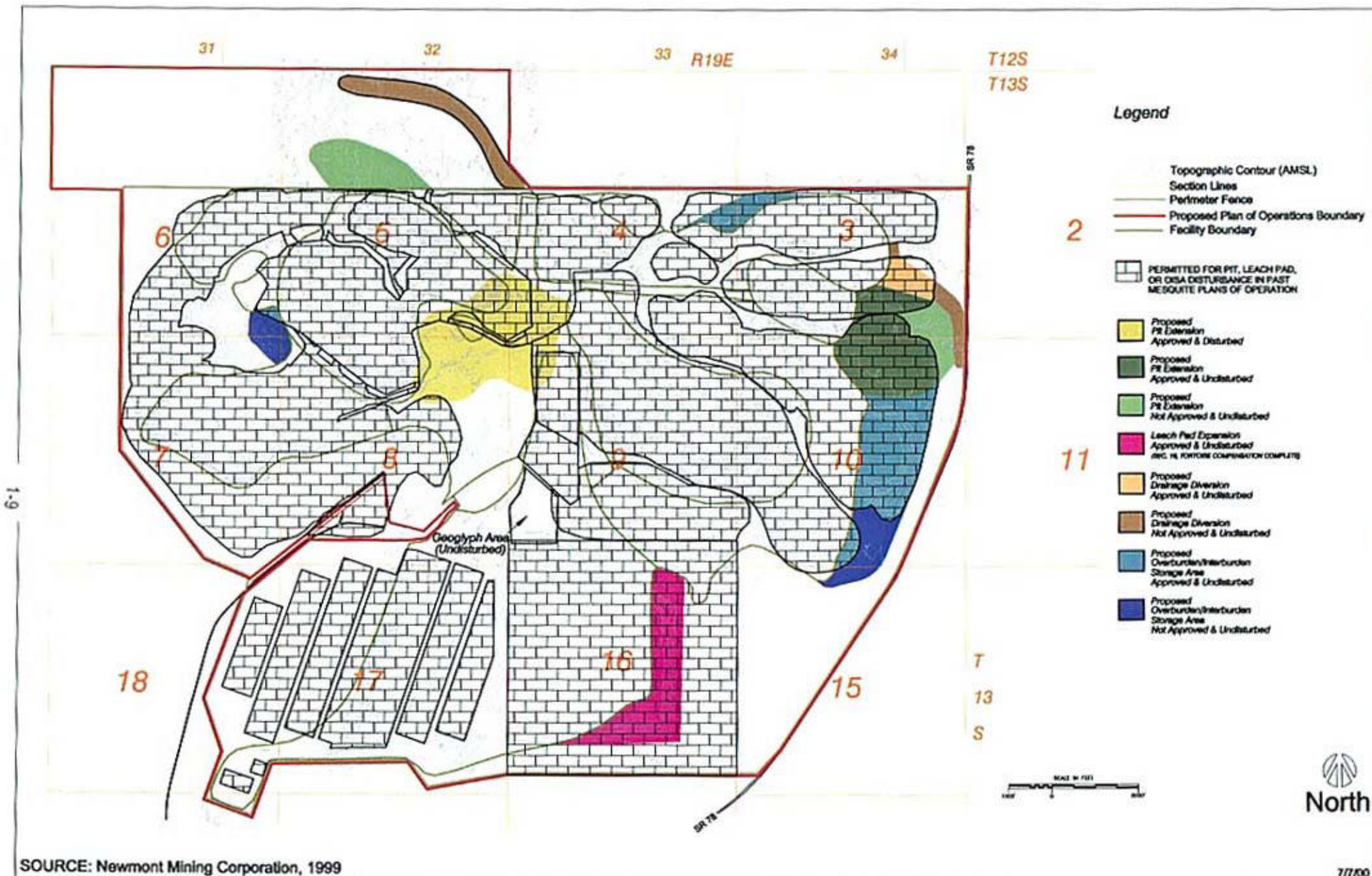
SOURCE: Newmont Mining Corporation, 1999



Mesquite Mine Expansion EIR/EIS

Existing Facility Layout

FIGURE
1.3-2

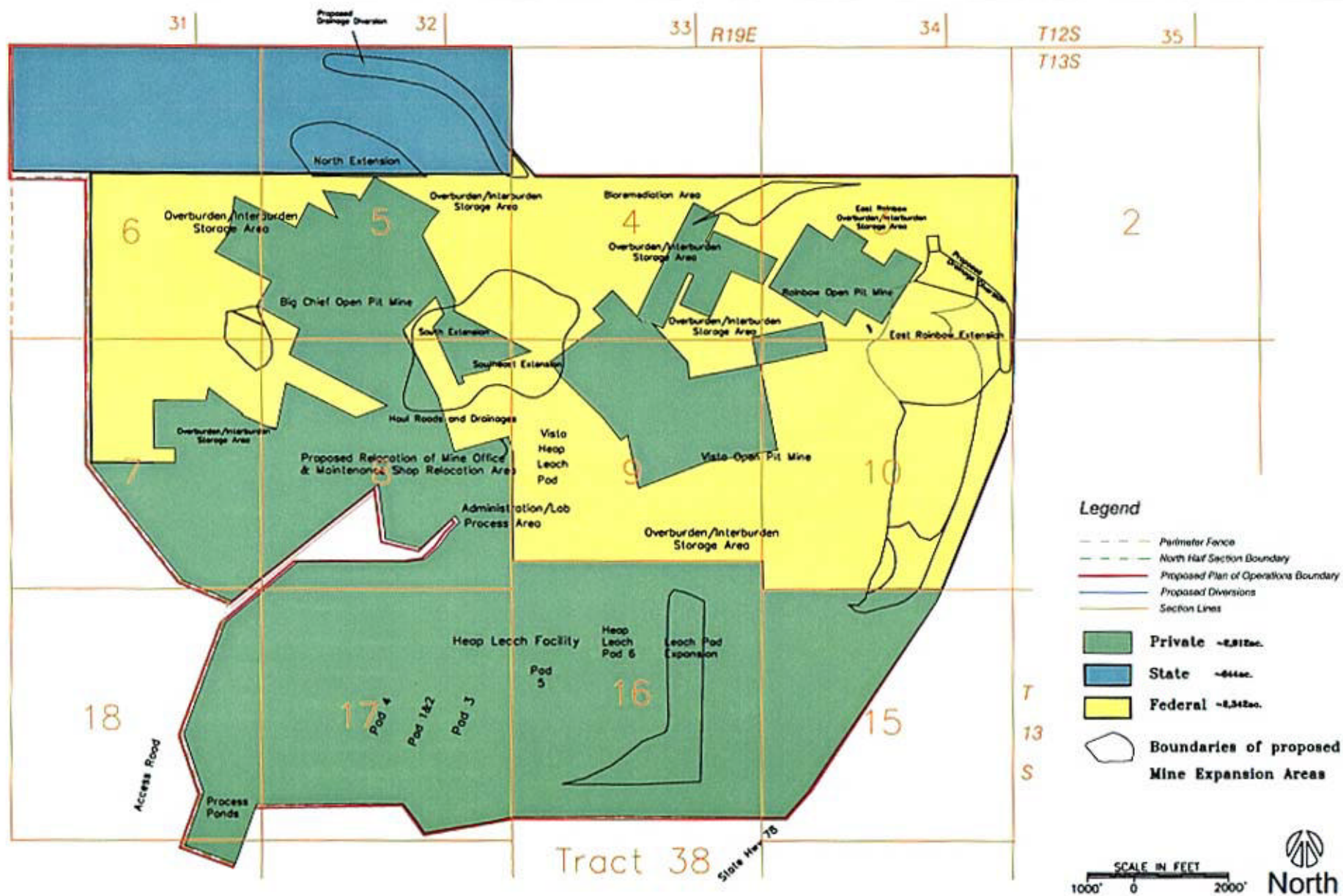


Mesquite Mine Expansion EIR/EIS

Proposed Mine Expansion Areas and Areas Having Existing Disturbance Permits

FIGURE

1.3-3



SOURCE: Newmont Mining Corporation, 1999, 2000

6/30/00

Mesquite Mine Expansion EIR/EIS

Land Status Within Proposed Plan of Operations Boundary

FIGURE
1.3-4

Table 1.3-1
Existing and Permitted Disturbance
Acreage, Mesquite Mine

Facility	Acreage of Disturbance	
	Cumulative Allowable*	Existing
Open Pit Mines		
Big Chief		350
Rainbow		77
Vista		335
Open Pit Mine Subtotal	968	762
Heap Leach Pads		
Nos. 1, 2, 3, &4 (combined)		292
Pad 5		121
Pad 6		150
Vista Pad		82
Heap Leach Pad Subtotal		645
Ponds and Leach Facility Roads		258
Heap Leach Facility Total	1,145	903
Overburden/Interburden Storage Areas (OISA) (Includes Clay Stockpiles)	1,690	1,219
Ancillary Facilities**	1,159	771
TOTAL	4,962	3,655

Note: * Allowable under existing permits and approvals summarized in the current Consolidated Plan of Operations.

** Includes exploration disturbance, haul roads, and storm water diversion channels.

Source: Newmont Gold Company, 1999.

If the landfill project proceeds, it would be located on portions of and adjacent to the Mesquite Mine. The landfill would share some existing facilities with the mine.

1.3.3 Previous Environmental Documents

The following environmental documents were previously prepared for the Mesquite Mine or the Landfill site:

1. *Final Environmental Impact Report/ Environmental Assessment for the Mesquite Project, Imperial County, California* (SCH No. 84040408); prepared for and under the supervision of the BLM and the County of Imperial by The Butler Roach Group, Inc. (BRG Consulting, Inc.) and St. Clair Research Systems, Inc. dated December 12, 1984. This EIR/EA addressed the construction and operation of an open-pit gold mine and on-site ore processing facilities, located near Glamis in Imperial County, using the heap leaching/carbon absorption process.
2. *Final Environmental Assessment, EA No. CA 067-85-10, for the 161/92 kV TAP Substation and ROW Permit, No. CA 17187, for a 92 kV Transmission Line to the Gold Fields Operating Co.-Mesquite Site, Imperial County, California*; prepared for and under the supervision of the BLM and County of Imperial by The Butler Roach Group, Inc., and Environmental Solutions, Inc., dated May 10, 1985. This EA addressed the construction of electric transmission facilities to supply power to the Mesquite Project near Glamis in Imperial County, California.
3. *Final Environmental Impact Report/Environmental Assessment, EA No. CA-067-87-48, for the VCR Mining Project, Imperial County, California* (SCH No. 87052709); prepared for and under the supervision of the BLM and County of Imperial by Environmental Solutions, Inc., dated October 28, 1987. This EIR/EA addressed the approximate 2,000 acres to be developed with four open-pit mines, overburden and low-grade ore stockpiles, and modifications to SR 78. This project is an expansion of the previously proposed Mesquite mining operation.
4. Mesquite Mine Section 7 Consultation: The primary document associated with the Section 7 Consultation process is the Mesquite Mine Operations Biological Assessment for the Desert Tortoise (*Gopherus agassizii*), Bureau of Land Management, El Centro Resource Area, November 1991. The *Biological Opinion for the Continued Operations of Gold Fields Operating Company's Mesquite Mine* (BO No. 1-6-92-F-22) was issued by the U.S. Fish and Wildlife Service, Southern California Field Station, Carlsbad, on March 26, 1992 (as amended, per BLM, July 21, 1992).
5. *Final Environmental Impact Statement / Environmental Impact Report for the proposed Mesquite Regional Landfill Project, Imperial County, California* (SCH No. 92051024); prepared for and under the supervision of the Bureau of Land Management and the County of Imperial by The Butler Roach Group, Inc., dated June 30, 1995. This EIR/EIS addressed the 2,290-acre landfill proposed for portions of the Mesquite Mine property.

6. *Biological Opinion on the Proposed Chocolate Mountain Land Exchange, Imperial County, California (1-6-97-F-3)*. This 1997 biological opinion addressed the proposed land exchange that resulted in State of California ownership of the two half-sections north of Big Chief pit.
7. *Biological Opinion on the Proposed Mesquite Mine Exploratory Drilling Project (PCN-98-20004-TCD), Imperial County, California (1-6-98-F-39)*. This July 7, 1998 biological opinion addressed the proposed exploratory drilling program north of Big Chief pit.

These environmental documents are the most recent and comprehensive environmental documents that address existing environmental conditions in the vicinity of the proposed site. This EIR/EIS incorporates relevant information from these environmental documents. Where specific information from a previous document is used, the reference is identified within the text of this EIR/EIS.

All environmental documents listed above are hereby incorporated by reference and are available for public review during normal business hours at the following agencies: 1) County of Imperial Planning and Building Department, 939 Main Street, El Centro, California 92243 and 2) Bureau of Land Management El Centro Resource Area, 1661 South Fourth Street, El Centro, California 92243.

1.3.4 Previous Mine Approvals

The following section provides an overview of Mesquite Mine approvals obtained since 1984. Specific agency approval documents are listed by agency, following the overview.

- **Permits for Initial Development and Operation, 1984-85**

Twenty-eight permits were required: 14 federal, 3 State of California, and 11 local (see Appendix A, Final EIR/EA for the Mesquite Project, Imperial County, California for the specific list). No U.S. Fish and Wildlife Service Biological Opinion, compensation, or Army Corps of Engineers 404 permit was required. The Corps of Engineers reviewed the Draft EIR/EA and declined jurisdiction, Nov. 2, 1984 (see Chapter 11, Comment Letter #7 in that same EIR/EA).

- **Permits for Expansion of the Mining Operation, 1987-88**

Twenty-four permits were required: 12 federal, 3 State of California, and 9 local (see Appendix A, Final EIR/EA for the VCR Mining Project, Imperial County, CA, Oct. 28, 1987). The U.S. Fish and Wildlife Service reviewed the document, and made comments (see letter #1). No Biological Opinion, Consultation, or compensation was required.

- **Permits for Continued Operations of Goldfields Operating Company's Mesquite Mine, 1992**

Biological Opinion 1-6-92-F-22, March 26, 1992. Proposed disturbance of all of Sec. 16 (640 acres) plus 20 acres of miscellaneous disturbance. Compensation consisted of 990 acres of land deeded to BLM by Goldfields on May 1, 1992.

- **Permits for Consolidated POO, 1995**

No additional permits were required. The Consolidated POO simply compiled existing mine plans.

- **Permits for exploration in two northern half-sections, 1998**

Biological Opinion 1-6-98-F-39, July 7, 1998. Exploration activities and drilling were anticipated to result in disturbance of 15 acres (Phases I and II); compensation for that disturbance was required at a 3:1 ratio. Forty-five acres of compensation were thus required, of which 9 must be microphyll woodland (to compensate for impacts to 3 acres of microphyll woodland). Completion of the compensation action is pending. Phase III of the program, comprising approximately 20 acres, was never undertaken.

Newmont obtained a Nationwide Permit (NWP-26) regarding Section 404 of the Clean Water Act, dated July 8, 1998. California Dept. of Fish and Game 2081 and 1603 permits were obtained, as was Reclamation Plan RP97-005, issued by Imperial County.

The permitted program of exploratory drilling was subsequently conducted in the northern halves of Sections 5 and 6 of T13S, R19E. This program consisted of 387 boreholes, of which only 154 boreholes were completed. Geologic and metallurgical evaluation of the drilling results is ongoing. The proposed expansion of the North Big Chief Open Pit Mine discussed in Section 4.0 of this Plan is based on current knowledge of that deposit.

Following is a listing of existing federal, state, and local approvals for the Mesquite Mine. These documents can be reviewed at the Bureau of Land Management, 1661 S. Fourth St., El Centro, California 92243; or at the Imperial County Planning and Building Department, 939 Main Street, El Centro, California 92243.

FEDERAL AGENCIES

Bureau of Land Management:

The Mesquite Mine Consolidated Plan of Operations 1995

The Plan of Operations Amendment Narrative Optimization of Operating Plans 7/12/89

The VCR Plan of Operations (BLM No. CAMC 109887/121229) 11/4/87

EIR/EA certified as adequate by BLM (BLM No. CA-067-87-48) 11/2/87

The Mesquite Plan of Operations (BLM No. CAMC 81188/261) January, 1985

EIR/EA certified as adequate by BLM (BLM No. CA-067-85-05) 12/27/84

Fish and Wildlife Service

Biological Assessment, Section 7 Consultation, Biological Opinion (Endangered Species Act, 16 USC 1531-1544), 1992, 1998

STATE AGENCIES

California Regional Water Quality Board:

Waste Discharge Requirement (Cal Water Code 13000 *et seq.*) Permits 1985, 1988, 1991, 1998.

Department of Fish and Game

California Endangered Species Act 2081 Permit, #2081-1998-26-6

California Streambed Alteration 1603 Permit, #5-184-98, 6/23/98

California State Lands Commission

State Mineral Prospecting Permit (PRC 8039.2)

LOCAL AGENCIES

Imperial County Air Pollution Control District:

Newmont Mesquite Mine, Permit No. 1920A-4, Mining Gold Plant

Newmont Mesquite Mine, Permit No. 1920A-9, Mining Mobile DSL

Newmont Mesquite Mine, Permit No. 1920A-10, Mining Petroleum Storage

Newmont Mesquite Mine, Permit No. 2613, Misc. (soil remediation)

Newmont Mesquite Mine, Permit No. 2667, Mining

Imperial County Board of Supervisors:

Reclamation Plan RP97-005 - plan for reclamation of lands in the two north half-sections after exploratory drilling; 5/27/98.

File No. 96-0037 – (Amendment 4 to Conditional Use Permit 786-88 approved by Planning Commission 1/8/97, recorded 7/9/97

File No. 96-0026 – (Amendment 4 to Conditional Use Permit 684-84 approved by Planning Commission 1/8/97, recorded 7/9/97

Conditional Use Permit 786-88 (VCR expansion)

Conditional Use Permit 788-88 (gravel crushing/hot batch plant) – temporary 1 year

Conditional Use Permit 684-84 (Goldfields, also referred to as “Mesquite”)

Conditional Use Permit 598-82 (finite heap leach test project) - 1 year

Conditional Use Permit 503-81 (Mining Mgmt. Inc.) - original mining Conditional Use Permit for the area

Imperial County Department of Environmental Health

Solid Waste Disposal Permit Exemption

1.4 RELATIONSHIP TO IMPERIAL COUNTY POLICIES, PLANS, AND PROGRAMS

1.4.1 Imperial County Planning/Building Department

The Imperial County Planning/Building Department is responsible for implementing policies that guide land use and development in Imperial County. The proposed mine expansion would require a Conditional Use Permit (CUP) and Building Permits from the Imperial County Planning/Building Department before it can begin mining operations in the presently unpermitted expansion areas. A separate CUP would also be required to provide for joint usage of the existing Gold Fields water wells by the Mesquite Mine and the approved but as yet unbuilt Mesquite Regional Landfill. The County of Imperial is the lead agency for CEQA purposes.

The CUP would regulate the overall project and would include conditions of approval to ensure implementation of the project design features and mitigation measures identified in this EIR/EIS and additional mitigation measures required for permitting of the Proposed Action.

Imperial County is also the local agency responsible for implementing the California Surface Mining and Reclamation Act (SMARA).

1.4.2 Imperial County Air Pollution Control District

The Imperial County Air Pollution Control District (ICAPCD) is responsible for issuing permits that satisfy all district, state, and federal air quality rules and regulations, including new and modified stationary source review (APCD Rule 207). Based on recent discussions with ICAPCD, Newmont’s

existing Authority to Construct and Permit to Operate will be modified to incorporate the proposed facilities. Upon completion of the approval process, a revised Authority to Construct and a Permit to Operate and amendments thereto would be issued by the ICAPCD for the Mesquite Mine Expansion.

1.5 RELATIONSHIP TO BLM POLICIES, PLANS, AND PROGRAMS

The project area is located within the Bureau of Land Management California Desert Conservation Area. BLM manages all activities on federal lands within the CDCA through the 1980 California Desert Conservation Area Plan as amended, prepared under the Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1701 et seq., herein, FLPMA). BLM is the lead agency for NEPA review of the Proposed Action.

Most federal land within the project area is managed by the BLM for multiple uses (Class M). The Class M lands designation provides for a wide variety of present and future uses such as mining, livestock grazing, recreation, energy, and utility development. Its objective is a controlled balance between higher intensity uses and the protection of public lands. The project will comply with all provisions of Federal Land Policy and Management Act of 1976 (FLPMA).

A reclamation plan that conforms to BLM Manual Handbook H-3042-1 is included in the Plan of Operations (POO), which was revised as of November 12, 1999. The POO and Reclamation Plan are available for review at El Centro offices of the BLM and the County of Imperial, as well as the BLM State office in Sacramento, and the offices of BRG Consulting, Inc. in San Diego.

A California Cyanide Management Plan per BLM 1992 has been prepared and is available for review during normal business hours at the BLM El Centro Resource Area offices, 1661 South Fourth Street, El Centro, California, 92243.

1.6 RELATIONSHIP TO OTHER GOVERNMENTAL POLICIES, PLANS & PROGRAMS

1.6.1 Federal Agencies

1.6.1.1 Environmental Protection Agency (U.S. EPA)

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for developing and implementing most aspects of environmental policy in the United States. The following major laws, implementation of which is administered by the U.S. EPA, would apply to the Proposed Action.

- Resource Conservation and Recovery Act (RCRA), Subtitle C - This law and supporting regulations apply to the management of hazardous wastes. Hazardous wastes would not be deposited at the proposed Mesquite Mine Expansion. Hazardous wastes may be created and stored in accordance with state and federal regulations, at the proposed expansion. Procedures to handle these materials would be implemented in accordance with RCRA Subtitle C.
- Clean Air Act (CAA) - This law sets standards for air emissions throughout the country. Applicable programs established by this law include: the National Ambient Air Quality Standards (NAAQS), which set maximum allowable concentrations for certain criteria pollutants; Prevention of Significant Deterioration (PSD) Program, which is designed to protect areas that have not exceeded NAAQS; New Source Performance/Review Program, which sets standards for stationary source emissions; and the Mobile Source Emission Standards, which set standards for vehicles. Under the provisions of the federal CAA, the California Air Resources Board (CARB) and the ICAPCD administer the federal CAA in California.
- Clean Water Act - This law establishes maximum contaminant levels (mcls), among other things, for protection of water resources throughout the United States. The California State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) administer the federal Clean Water Act in California.

1.6.1.2 U.S. Fish and Wildlife Service (USFWS)

The U.S. Fish and Wildlife Service (USFWS) has been charged with the responsibility to monitor the status of wild populations of certain flora and fauna, and to identify those that are in danger of extinction (endangered species) or are likely to become endangered in the foreseeable future (threatened species). Lists of these species are maintained by the agency. Potential impacts to federal listed species require consultation with the USFWS, as stated under Section 7 of the federal Endangered Species Act (ESA). If the USFWS advises a federal agency that a listed species may be present in the area of a proposed agency action, the agency must conduct a biological assessment to determine whether its proposal is likely to affect any listed species. If the assessment concludes that a protected species may be affected, the agency must initiate formal consultation with USFWS. Based upon the results of the formal consultation, USFWS must issue a written biological opinion. In its written opinion, USFWS determines if an action would jeopardize the continued existence of a listed species. Any "incidental take" of a listed species must be authorized by USFWS.

1.6.1.3 Advisory Council on Historic Preservation (ACHP)

Section 106 of the National Historic Preservation Act of 1964 requires federal agencies to provide the Advisory Council on Historic Properties (ACHP) an opportunity to comment on any project on federal lands, or projects that are federally funded or permitted, that have a potential to affect properties included in or eligible for inclusion in the National Register of Historic Places (NRHP). BLM has an agreement with ACHP that limits ACHP's involvement in BLM actions unless BLM cannot reach a determination of No Adverse Effect with the State Historic Preservation Officer (SHPO).

1.6.1.4 U.S. Department of Labor

The U.S. Department of Labor is responsible for labor policy, among other things, throughout the United States. The Mine Safety and Health Administration in the U.S. Department of Labor would enforce laws concerning worker safety at the proposed Mesquite Mine Expansion.

1.6.1.5 U.S. Army Corps of Engineers

Section 404 of the Clean Water Act authorizes the Secretary of the Army, acting through the Chief of Army Corps of Engineers, to issue permits for the discharge of dredged or fill material into the Waters of the United States, including wetlands. The term "Waters of the United States" has a broad meaning and incorporates both deepwater aquatic habitats and special aquatic sites, including wetlands, as follows:

- The territorial seas with respect to the discharge of fill material.
- Coastal and inland waters, lakes, rivers, and streams that are navigable Waters of the United States, including their adjacent wetlands.
- Tributaries to navigable Waters of the United States, including adjacent wetlands.
- Interstate waters and their tributaries, including adjacent wetlands.
- All other Waters of the United States not identified above, such as isolated wetlands and lakes, intermittent streams, prairie potholes, and other waters that are not a part of a tributary system to interstate waters or navigable Waters of the United States, the degradation or destruction of which could affect interstate commerce.

1.6.2 State Agencies

1.6.2.1 State Water Resources Control Board (SWRCB)

The SWRCB is the responsible agency for implementing the federal Clean Water Act in the State of California. In California, the Clean Water Act, as it pertains to mining activities, is implemented through Title 23, Chapter 15, Discharges of Waste to Land and Chapter 3, Water Resources Control Board, California Code of Regulations (CCR), as adopted on October 18, 1984. The Porter Cologne Water Quality Control Act, updated in 1989, regulates contaminants in surface or ground water in the State of California.

The SWRCB oversees the regulatory activities of the nine Regional Water Quality Control Boards (RWQCBs) in California. For the proposed Mesquite Mine Expansion, the Lower Colorado River RWQCB is the responsible agency for the Waste Discharge Requirements (WDRs) and National Pollution Discharge Elimination System (NPDES) Permits.

CCR Title 23, Chapter 15, Article 5 was recently established to require that holders of WDRs provide financial assurance of their ability to fund potential corrective action programs in the event that contamination of waters of the state occur from their actions.

1.6.2.2 California State Lands Commission (CSLC)

CSLC is responsible for managing four million acres of sovereign lands composed of tidal and submerged lands, navigable lakes, rivers and streams and 1.2 million acres of school lands granted to the State to benefit public education. Under Division 6 of the California Public Resources Code, the CSLC is directed to manage school lands incorporating a multiple use concept for land use planning. These uses have included recreation; research; farming, grazing, timber harvesting, oil, gas and geothermal development; mineral exploration, and mining while protecting the associated environmental resources. The CSLC is currently processing a mineral extraction lease application for 657.85 acres of land, of which approximately 97 acres would be disturbed by the proposed Mesquite Mine expansion.

1.6.2.3 California Air Resources Board (CARB)

CARB is responsible for enforcing state air pollution regulations. California has established 34 air quality management districts (AQMDs) and air pollution control districts (APCDs). CARB is responsible for overseeing that all AQMDs and APCDs air quality programs are being carried out effectively to meet all state and federal air quality standards. CARB is also responsible for regulating mobile sources. The Imperial County APCD (ICAPCD) is the agency responsible for air quality permitting, enforcement and air monitoring in Imperial County.

1.6.2.4 California Department of Fish and Game (CDFG)

The California Department of Fish and Game (CDFG) is responsible for state policies concerning fish contained in the state's waters and wildlife within the state borders. CDFG is responsible for the implementation and enforcement of the California Endangered Species Act of 1984 and the California Native Plant Protection Act of 1977. The CDFG will evaluate potential streambed alteration issues for the desert washes in the project area in accordance with Section 1603 of the California Fish and Game Code.

The Department is the state agency responsible for issuance of California Endangered Species Act (CESA) incidental take permits under Sections 2080-2081 of the California Fish and Game Code. Once a project has obtained an incidental take authorization under the federal Endangered Species Act for a species that is both federally and state listed, then the project proponent may apply to the Director of the Department for a determination of consistency under CESA. If the Director determines that the federal incidental take authorization is consistent with the goals and requirements of CESA, or if the Department fails to respond within 30 days of receiving the project proponent's petition, then no further authorization or approval is necessary. If the Director should determine that the federal authorization for the Proposed Action is not consistent with CESA under Section 2080.1 of the state Act, then the project proponent will be required to obtain a CESA incidental take permit from the Department.

1.6.2.5 State Historic Preservation Officer (SHPO)

BLM and SHPO have a State Protocol Agreement by which they cooperatively implement the National Programmatic Agreement among the Bureau of Land Management, the Advisory Council On Historic Preservation, and the National Conference of State Historic Preservation Officers regarding the manner in which BLM will meet its responsibilities under the National Historic Preservation Act. Under the State Protocol Agreement, BLM shall consult with SHPO under certain circumstances, including undertakings having an adverse effect as defined by 36 CFR 800.9(b) and undertakings where traditional cultural properties or sacred sites may be affected.

1.6.2.6 California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) has jurisdiction over state highways throughout California. Caltrans issues encroachment permits to land within its jurisdiction to ensure that the encroachments are compatible with the primary uses of the state highway system; to ensure the safety of the permittee and highway users; and to protect the State's investment in the highway facility that would be encroached upon. The Applicant would submit an application for an encroachment permit to allow the construction of any changes to storm water swales on State Route 78, if deemed necessary.

1.6.2.7 California Department of Conservation (DOC)

The Department of Conservation (DOC) has certain responsibilities pursuant to California's Surface Mining and Reclamation Act (SMARA). Prior to the commencement of surface mining operations, SMARA requires that mine operators obtain reclamation plan approval and establish a financial guarantee for reclamation. Approved plans must be amended, and those amendments approved, prior to substantial deviations. The reclamation plan, amendments, and financial assurances must be approved by the lead agency (city or county where the mine is located). Prior to approval, the lead agency is required to forward a copy of the reclamation plan and financial assurance to DOC for a thirty and forty-five day review respectively. Mine operators are required to file an annual report with and pay an annual fee to DOC. DOC has a statutory responsibility to ensure that mine operators are in compliance with SMARA and that lead agencies meet their responsibilities pursuant to SMARA. DOC also maps mineral occurrences of regional and statewide significance. The maps are provided to lead agencies for use in making land management decisions so that the production and conservation of mineral resources are encouraged.

1.6.3 Relationship to Other Governments

1.6.3.1 Quechan Indian Tribe

The Quechan Indian Tribe, through consultation with BLM, participates in the decision-making process as it concerns the Tribe's cultural practices and religious beliefs and practices.

1.7 AUTHORIZING ACTIONS

Based on responses from federal, state, and local governmental agencies during the scoping process and in response to the "Notice of Intent to Prepare an EIS" (NOI) and "Notice of Preparation of an EIR" (NOP), a number of authorizing actions have been identified that will be required prior to implementation of the proposed Mesquite Mine Expansion. Table 1.7-1 provides a summary of these actions.

1.8 PURPOSE OF THIS DOCUMENT

The purpose of this joint EIR/EIS is to provide the necessary environmental information to the public as well as decision-makers at the lead, responsible, and cooperating agencies in order to consider the proposed expansion of the Mesquite Mine.

Current mine operations consist of several open pits, overburden/interburden storage areas (OISAs), heap leach pads and associated ancillary facilities for the recovery of precious metals. This EIR/EIS document is for the proposed, but currently unpermitted, expansion of the following existing facilities:

- Extensions of the Big Chief Open Pit Mine;
- Extension of the Rainbow Open Pit Mine;
- Expansion of overburden/interburden storage areas; and,
- Construction of drainage diversions.

It is anticipated that these proposed expansions would allow Mesquite operations to continue through the year 2006 or longer, depending on economics.

The environmental analyses presented in this EIR/EIS are generally conservative. "Best" and "Worst" case analyses were avoided in favor of more balanced "Maximum Likelihood" analyses. This approach was adopted to provide the reader with an understanding of the environmental effects that are likely to occur, and not to affect the reader's understanding by presenting environmental effects that are unlikely to occur. CEQA does not require "worst case" analyses. Maximum likelihood analyses are allowed by NEPA provided they are supported by credible scientific evidence, are not based on pure conjecture, and are within the rule of reason (40 CFR 1502.22(b)(4)).

Table 1.7-1

**Summary of Required Permits/Actions for
Proposed Mesquite Mine Expansion**

Agencies	Permit/Action
Federal	
Advisory Council on Historic Preservation (Per an existing agreement, ACHP only is involved if BLM cannot reach a determination of No Adverse Effect with the State Historic Preservation Officer)	Consult with BLM, SHPO, and consulting parties on undertakings having an adverse effect (Sec. 106 of the National Historic Preservation Act of 1964)
Bureau of Land Management El Centro Resource Area	Approve Plan of Operations amendment for mine and process operations, including Reclamation Plan (Federal Land Policy and Management Act of 1976)
	Initiate consultation under Section 7 of the Endangered Species Act
	Complete consultation under Section 106 of the National Historic Preservation Act of 1964
	Publish Record of Decision on EIS (National Environmental Policy Act of 1969)
Bureau of Alcohol, Tobacco and Firearms	Approve Use of High Explosives Permit
United States Army Corps of Engineers	Approve individual permit to dredge or fill Waters of the U.S. under the Clean Water Act, Section 404
United States Fish and Wildlife Service	Review Biological Evaluation (Section 7 of the Endangered Species Act)
	Issue Biological Opinion (Section 7 of the Endangered Species Act)

Table 1.7-1
Summary of Required Permits/Actions for
Proposed Mesquite Mine Expansion

Agencies	Permit/Action
State of California	
California Department of Fish and Game	Review Biological Evaluation. Issue CESA Incidental Take Permit (Sections 2080-2081, California Fish and Game Code) Issue Streambed Alteration Agreement (Section 1603 of the California Fish and Game Code)
California Department of Transportation (Caltrans)	Issue permits necessary for improvements to state roads or within Caltrans rights-of-way (encroachment permit)
California Department of Parks and Recreation, State Historic Preservation Office (SHPO)	Consult with BLM under the State Protocol Agreement when thresholds for SHPO review are met.
California Regional Water Quality Control Board Colorado River Basin Region	Approve Waste Discharge Requirements for discharges of waste to land (Title 23, Chapter 15 of California Code of Regulations)
	Approve National Pollution Elimination System Permit (NPDES) for Storm Water Discharge During Construction (Clean Water Act)
	Approve National Pollution Elimination System Permit (NPDES) for Storm Water Discharge from Industrial Facilities (Clean Water Act)
	Approve Certificate of Compliance with Section 401 of the federal Clean Water Act
California State Lands Commission	Approve Mineral Extraction lease (Division 6, California Public Resources Code)

Table 1.7-1

Summary of Required Permits/Actions for Proposed Mesquite Mine Expansion

Agencies	Permit/Action
Local Jurisdictions	
Imperial County Board of Supervisors	Approve Conditional Use Permit Amendment and Reclamation Plan for mine expansion Approve Conditional Use Permit Amendment for use of water from the Mesquite Mine water wells Certify this EIR (California Environmental Quality Act) Approve Mitigation, Monitoring and Reporting Program (California Environmental Quality Act)
Imperial County Air Pollution Control District	Modify existing Authority to Construct, Permit to Operate, and approve the revised permits.
Imperial County Fire Department	Approve Plan Review for compliance with Uniform Fire Code
Imperial County Department of Health Services	Approve Water System Permit
Imperial County Planning/Building Department	Approve Building Permits
Imperial County Department of Public Works	If necessary, revise Ground Water Extraction Permit Approve new Mesquite water well permit

Source: BRG Consulting, Inc., 2000.

1.9 CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

BLM Handbook H-1790-1 identifies the critical elements of the human environment that must be addressed in Environmental Impact Statements. Table 1.9-1 presents the critical element, the relevant authority, and a brief discussion of each element as it relates to the Proposed Action and alternatives. This table identifies the Section in this EIR/EIS that discusses each of these elements and also identifies elements that would not be affected by the Proposed Action or Alternatives, and are not further discussed in this EIR/EIS.

1.10 SCOPING

In accordance with NEPA and the BLM Handbook, public scoping meetings were held for the Proposed Action. The first meeting was held on January 26, 1999 at the Best Western Inn Suites Palm Canyon Room in Yuma, Arizona. The second meeting was held on January 27, 1999 at the El Centro Community Center in El Centro, California. A third meeting was held on January 28, 1999 at the San Diego State University Aztec Center Backdoor Room in San Diego, CA. There were 63 people in attendance at these meetings.

Key issues identified by the public at these meetings include visual and socioeconomic impacts, water and storm drainage, biology, land use, future expectations, new impact area, utilities, existing setting, EIR/EIS document process, air quality and water quality impacts, previous permits, alternatives, and protection of on-site cultural resources/sacred sites. Additional details are contained in Appendix A-1 of this EIR/EIS.

1.11 Notice of Preparation, Notice of Intent and Responses

A Notice of Preparation (NOP) of a Draft Environmental Impact Report/Statement for the Mesquite Mine Expansion was published in the San Diego Union Tribune on December 14, 1998. On December 28, 1998 the Bureau of Land Management published the Notice of Intent (NOI) in the Federal Register. The NOP, NOI, and responses received are contained in Appendix A-2 of this EIR/EIS.

Table 1.9-1
Critical Elements of the Human Environment
Proposed Mesquite Mine Expansion

Element	Relevant Authority	Discussion
Air Quality	The Clean Air Act, as amended (42 USC 7401 et seq.)	The Proposed Action has the potential to release air pollutants. These emissions are analyzed in the Air Quality Section of this EIR/EIS.
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.)	Impacts are addressed in the Cultural Resources and Land Use Section of this EIR/EIS
Cultural Resources	National Historic Preservation Act, as amended (16 USC 470)	Proposed Action impacts are addressed in the Cultural Resources Section of this EIR/EIS.
Farm Lands (prime and unique)	Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.)	There are no prime or unique farmlands on the proposed site. No further discussion of this element is provided in this EIR/EIS.
Floodplains	Executive Order 11988, as amended, Floodplain Management, 5/24/77	Storm water runoff effects are addressed in the Geology/Soils/ Mineral Resources and Water Quality Sections of this EIR/EIS.
Native American Religious Concerns	American Indian Religious Freedom Act of 1978 (42 USC 1996)	Native American religious concerns are addressed in the Cultural Resources section of this EIR/EIS.
Threatened or Endangered Species	Endangered Species Act of 1973, as amended (16 USC 1531)	Threatened and endangered species occur in the vicinity of the Proposed Action. Impacts are discussed in the Biological Resources section of this EIR/EIS.
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.); Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 USC 9615)	Mining activities from the Proposed Action generate by-products that are considered hazardous waste. The effects of these wastes are discussed in the Water Quality and Environmental Health and Safety Section of this EIR/EIS.
Water Quality, Drinking/ Groundwater	Safe Drinking Water Act, as amended (42 USC 300f et seq.); Clean Water Act of 1977 (33 USC 1251 et seq.)	The Proposed Action has the potential to affect water quality. These effects are discussed in the Water Quality Section of this EIR/EIS.
Wetlands/ Riparian Zones	Executive Order 11990, Protection of Wetlands, 5/24/77	Wetlands are addressed in the Biological Resources Section of this EIR/EIS.
Wild and Scenic Rivers	Wild and Scenic Rivers Act, as amended (16 USC 1271)	There are no wild and scenic rivers in the project area.
Wilderness	Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.); Wilderness Act of 1964 (16 USC 1131 et seq.); California Desert Protection Act of 1994 (16 USC 410 et seq.)	There are no wilderness areas at or near the Mesquite Mine.

Source: BRG Consulting, Inc., 2000.

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